



**United States Department of Agriculture  
Natural Resources Conservation Service**

## **Energy Enhancement Activity – Energy Audit of Agricultural Operations**

### **Energy Audit Enhancement**

Agriculture faces rising energy costs, regardless of whether the energy is direct (energy derived directly from a power source, such as electricity or diesel, and consumed for a particular use such as heating, lighting, or transportation) or embedded (energy used for production, packaging, and transportation that is ‘captured’ in fertilizers and pesticides). This enhancement activity requires farmers and ranchers to review how they use energy in their operations. This in turn helps them to identify ways to reduce costs, improve energy efficiency, and reduce impacts on the environment.

### **Benefits**

An energy audit is the first step in improved energy management. Operators need to know how much and where energy is used on the farm before proper alternatives can be pursued. Ultimately, the energy audit allows the operator to make the right choices for saving the most energy for the least cost.

### **Criteria for Energy Audit Activity**

This enhancement requires a participant to conduct a farm energy audit. The purpose of the audit is to evaluate energy management opportunities on the farm or ranch.

### **Activities applicable to energy audits:**

- A baseline is developed to characterize and record direct types of on-farm energy use. Individual unit operations, processes, and major energy-consuming equipment are evaluated to identify energy management opportunities and high-return-on-investment projects.
- Once the baseline analysis is complete a report is produced that describes the baseline, each major conservation opportunity area, an estimate of the cost to implement the changes, the potential savings that will be generated, and an estimation of the payback period..
- At a minimum, farm energy audits must identify baseline usage for non-residential structures and all stationary equipment used in farming operations. Vehicles and the farmstead are not required.
- To implement this enhancement activity the operator must use a professionally qualified energy auditor or utility of their choice to conduct the audit. Operators should ensure that the auditor has relevant educational and professional experience, a successful track record in energy auditing, can provide objective advice, has declared any financial relationships with equipment vendors or service companies, and has qualified staff.

### **Reference:**

Phase II: On-Farm Energy Audit Program, 2006, OMAFRA, RFP Number OSS-073065  
[www.conservationbureau.on.ca/Storage/16/2182\\_On\\_farm\\_Final\\_Report\\_Feb14\\_07.pdf](http://www.conservationbureau.on.ca/Storage/16/2182_On_farm_Final_Report_Feb14_07.pdf)